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10/705,681	11/12/2003	Russell Patrick Fitzgibbon	1111-21	4656

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EXAMINER

CADUGAN, ERICA E

ART UNIT

PAPER NUMBER

3722

DATE MAILED: 07/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/705,681	<b>Applicant(s)</b> FITZGIBBON, RUSSELL PATRICK	
	<b>Examiner</b> Erica E. Cadugan	<b>Art Unit</b> 3722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 5/23/2005
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 3, 7-9, 15-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-2, 4-6, 10-14, 17-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/12/03 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/15/04
- 4) ☒ Interview Summary (PTO-413)  
Paper No(s)/Mail Date 7/11/05
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of the species of Figures 1-2, wherein the sensor arrangement is operable to sense at least one feature present in a tool in the form of a projection on the tool, is acknowledged. Applicant indicated that claims 1-2, 4-6, 10-13, 15, 17, and 18 are readable thereon. However, this does not appear to be accurate (e.g., it does not appear that claim 15 reads on the elected species). Note that the shown embodiment shows the tool being provided with two projections (a la claim 2), rather than with two recesses as set forth in claim 15. Additionally, Examiner notes that claim 14 reads on the elected embodiment (in addition to the claims indicated by Applicant). Thus, an examination of claims 1-2, 4-6, 10-13, 14, and 17-18 will be performed, and claims 3, 7-9, 15-16 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the paper submitted May 23, 2005.

### ***Drawings***

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "8" has been used to designate both a surgical tool (at the left of Figure 1) and a connector (at the bottom middle part of Figure 1). It is noted that it appears that changing the "8" at the left side of the Figure to -18— (in accordance with paragraphs 0033-0034 of the specification, for example) would serve to correct this issue.

## **INFORMATION ON HOW TO EFFECT DRAWING CHANGES**

### **Replacement Drawing Sheets**

Drawing changes must be made by presenting replacement figures which incorporate the desired changes and which comply with 37 CFR 1.84. An explanation of the changes made must be

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presented either in the drawing amendments, or remarks, section of the amendment. Any replacement drawing sheet must be identified in the top margin as "Replacement Sheet" and include all of the figures appearing on the immediate prior version of the sheet, even though only one figure may be amended. The figure or figure number of the amended drawing(s) must not be labeled as "amended." If the changes to the drawing figure(s) are not accepted by the examiner, applicant will be notified of any required corrective action in the next Office action. No further drawing submission will be required, unless applicant is notified.

Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and centered within the top margin.

### **Annotated Drawing Sheets**

A marked-up copy of any amended drawing figure, including annotations indicating the changes made, may be submitted or required by the examiner. The annotated drawing sheets must be clearly labeled as "Annotated Marked-up Drawings" and accompany the replacement sheets.

### **Timing of Corrections**

Applicant is required to submit acceptable corrected drawings within the time period set in the Office action. See 37 CFR 1.85(a). Failure to take corrective action within the set period will result in ABANDONMENT of the application.

If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings **MUST** be filed within the **THREE MONTH** shortened statutory period set for reply in the "Notice of Allowability." Extensions of time may **NOT** be obtained under the provisions of 37 CFR 1.136 for filing the corrected drawings after the mailing of a Notice of Allowability.

### ***Claim Objections***

3. Claim 18 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Specifically, it does not appear that the "robot" further limits the "tool holder arrangement". Examiner suggests amending the claim as set forth in the proposed Examiner's Amendment referred to previously to correct this issue.

4. Claim 14 is objected to because of the following informalities: in the last line, it appears that —of—should be inserted prior to “said rods”. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-2, 4-6, 10-14, and 17-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 4, it is unclear via the use of the indefinite article “a” whether “a tool” is intended to be a subset of the previously set forth “plurality of tools”. If so, Examiner suggests changing “a tool” to language such as —one of said tools—for clarity. The same situation exists in claim 17, line 4 with the limitation “a tool”. A similar situation exists in claim 1, line 5 with “a specific tool”, and in claim 1, penultimate line, with “a tool”.

Similarly, in claim 1, line 5, it is unclear via the use of the indefinite article “a” whether “a feature or features” is intended to be the same “at least one feature” previously set forth in the claim. If so, Examiner suggests changing “a feature or feature” to —said feature or features--.

These examples are not meant to be a complete listing of such occurrences, but are meant to be a representative example. Applicant is required to review the claims and correct any other such similar occurrences. Examiner notes that the proposed Examiner’s Amendment, faxed to Applicant on June 2, 2005, and attached to the enclosed interview summary, would correct all such occurrences.

In claims 4 and 14, there is no axis or frame of reference provided in the claims for determining what is meant by “axially”.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-2, 4-6, 10-11, 13-14, and 17-18, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 5,413,573 to Koivukangas.

Koivukangas (hereinafter ‘573) teaches a “tool holder arrangement” wherein a “tool holder” 12 is mounted on a “support” 3, 20 and allows removable attachment of tools 4 thereto (see Figures 1-2, col. 3, lines 53-64, for example). ‘573 further teaches the use of a “sensor arrangement” 15, 16 operable to sense at least one feature unique to a specific tool and thus enable a “processor” 9 to identify the tool (col. 4, lines 19-46, for example). Additionally, note that the tool 4 is electrically isolated from the “support” 3, 20 because the member 12 is made of plastic such as Teflon or polyacetal (col. 3, lines 62-64, Figure 2), i.e., a material of low or no electrical conductivity.

Also, re claim 2, for example, note that the members 15, 16 of the sensor arrangement can either be recesses or projections (i.e., the members 15 can be either recesses or projections and so can the members 16, see col. 4, lines 59-62, for example, also Figure 2, for example).

Also, re claim 4, for example, note that the longitudinal direction of the projections 15 (considered “rods” as broadly claimed) shown in Figure 2 extends generally in the left-right

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horizontal direction, and that such projections (whether the projections were 15 or whether they were 16) are considered “axially movable” in the direction of their longitudinal axis via movement of either the member 12 or the member 3, i.e., if elements 15 are in the form of projections as shown in Figure 2, they are “axially movable” relative to the tool holder 12 when they are moved when orientation arm or “support” 3 moves, and likewise, if elements 16 are in the form of projections as described in col. 4, lines 59-62, they are “axially moveable” relative to the “support” 3 when the “tool holder” 12 is so moved. Note that whichever of elements 15, 16 is configured as a “projection” or “rod”, the other of elements 15 or 16 is considered a “switch element” as claimed (see col. 4, line 48 through col. 5, line 13, for example).

Re claim 5, see col. 6, lines 16-31 and especially lines 23-27.

Re claim 6, note that ‘573 generically teaches that there are “one or more” of the described sensor arrangements (col. 4, lines 41-47), and that as shown in Figure 5b, for example, note that the members 16 are considered to be “evenly angularly spaced about the circumference of a notional circle” as broadly claimed, wherein “notional” is understood to mean “imaginary”.

Re claim 10, member 24, for example (which forms part of the tool holder 12) can be considered the claimed “connector element”, noting that the tool 4 is attached thereto, and that element 24 is both comprised of and mounted to (mounted to element 23 of the tool holder 12) an element made of “insulating material” in the form of plastic such as Teflon or polyacetal (col. 3, lines 62-64, see also Figure 2 and col. 5, lines 45-61, for example).

Re claim 11, as broadly claimed, note that there are plural sensor arrangements as described previously, each sensor arrangement “operable” to sense a “feature” (as broadly claimed, such as a part of the respective sensor arrangement) of the tool.

Re claim 18, note that element 3 is an orientation or "robot" arm (see Figures 1-2).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 12, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Koivukangas ('573) as applied to at least claims 1 and 11 above.

'573 teaches all aspects of the claimed invention as set forth in claims 1 and 11 above, but does not teach any sort of alarm signal.

However, Examiner takes Official Notice that the use of an alarm signal in conjunction with a multiple-contact sensor, wherein the alarm signal warns that not all contacts are in use, for example (or is not all contacts are functioning properly), is notoriously well-known for the purpose of providing more reliable and precise operation of the device in which the sensor system/warning signal is employed.

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have provided the sensor arrangement taught by '573 with a well-known alarm signal, such as described previously, for the purpose of providing more reliable and precise operation of the tool connection system taught by '573, as would be a benefit readily understood by one of ordinary skill in the art.

***Conclusion***



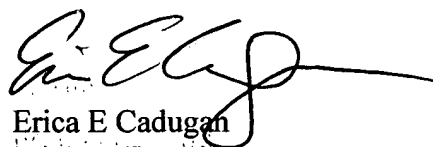
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11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erica Cadugan whose telephone number is (571) 272-4474. The examiner can normally be reached on Monday through Thursday from approximately 6:30 a.m. to 4:00 p.m., and every other Friday from 6:30 a.m. to 3:00 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached at (571) 272-4502.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Additionally, the Office encourages Applicants to file responses and other papers by fax. The Official fax number for such filings is (571) 273-8300.



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Art Unit 3722